



1998

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

APR 30 1999

REPLY TO THE ATTENTION OF WU-16J

Mr. James Slutz, Director
Division of Oil and Gas
Indiana Department of Natural Resources
402 W. Washington St. W 293
Indianapolis, Indiana 46204-2748

Dear Mr. Slutz:

On November 4-6, 1998, members of my staff met with you and your program staff to discuss issues of mutual interest in regard to your Agency's Class II Underground Injection Control (UIC) Program. During the visit, we discussed ongoing program aspects and issues that have arisen since our last visit in 1996.

Enclosed is a copy of our report containing the UIC Branch Team's findings. We have highlighted areas for future emphasis and action for both agencies. As usual, the Region is pleased to find that the Indiana Department of Natural Resources (IDNR) continues to administer an effective Class II UIC program. The IDNR has continued to demonstrate progress, with each visit, in strengthening various program areas and developing a more mature Class II program. We are pleased with the evolution of both your permitting and enforcement programs, the IDNR well plugging program, more enhanced public participation, and the Fiscal Year 1998 Regional Class II meeting in Terre Haute, Indiana.

If we can be of assistance to you, or if you have any questions or comments about our findings, please contact Charles Anderson of my staff at (312) 886-1501. We appreciate your dedication and continued support of the UIC program and the efforts of your staff.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Valerie J. Jones", is written over the typed name.

for Valerie J. Jones, Chief
Underground Injection Control Branch

Enclosure

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Sincerely yours,

Valerie J. Jones, Chief
Underground Injection Control Branch

Enclosure

Introduction

The Indiana Department of Natural Resources (IDNR), Division of Oil and Gas, is administering an effective Class II program. The IDNR maintains a strong permitting and enforcement program along with providing enhanced public participation. For example, in Fiscal Year (FY) 1998, 77 NOV's were issued for Class II violations which is 69 percent of all NOV's issued by the Division. In the area of well pluggings, the IDNR plugged 51 orphan wells in FY 1998. The Region is pleased with the continued progress the IDNR is making in developing and expanding various areas of its Class II UIC program.

State Program Expectations

The IDNR maintains a Class II inventory of approximately 1,350 wells. According to workplan commitments, the IDNR committed to issuing 54 permits for FY 1998. The Division of Oil and Gas (the Division) still uses the results of the USDW study commissioned through the Indiana Geologic Survey (IGS) for permit applications, file reviews and during the temporary abandonment application process. The Division also plans to use the IGS study to develop rules regarding the establishment of surface casing requirements. The Division continues to inspect each Class II well annually. Each check will consist of a surface inspection of the well and the associated fluid storage facilities. The Division committed to performing 130 file reviews in FY 1998. Additionally, operators compile quarterly monitoring reports which contain information about maximum pressures, volumes, and numbers of operating days per month for each well. Division Staff review the reports to assure compliance with permit conditions.

Highlights of State Performance

Region 5 is pleased with the effectiveness of the Class II UIC program. Of particular note is the outstanding job on the part of IDNR in hosting the Class II meeting in Terre Haute during May 1998. Region 5 looks forward to the next Class II meeting. The IDNR continues to excel in its permitting and enforcement programs. In fact, the Division issued 41 Class II permits in 1998 and issued 77 enforcement actions to noncompliant Class II operators. The Region is pleased with the increased activity in the area of orphan well pluggings. So far, 51 wells have been plugged from IDNR's plugging fund. In the area of Special Cases/Issues, the IDNR has been involved in enhanced public participation, for example in karst prone areas where special precautions apply. Additionally, inventory numbers were submitted on a timely basis in FY 1998.

Areas for Additional Follow-up

Dual Completion Monitoring Test

Discussions occurred regarding the issue of dual completion wells , that is those wells used for both oil production and the disposal of brine. Both the Region and the IDNR expressed concerns about adequate environmental protection and the availability of effective monitoring. The Region will report back to the IDNR in regard to specific questions surrounding this test.

Fluid Return Calculations after SAPTs

For a number of years, the Regional contract field inspectors have used fluid returns as a qualitative or semi-quantitative check on packer depths after a well has performed a SAPT. In general, if a well is pressurized for a pressure test and later depressurized, the volume of fluid coming from the annulus is proportional to the pressure applied, the compressibility of the fluid, the size of the casing and tubing, and the depth to the packer. In most cases, the pressure applied, the compressibility of the fluid in the annulus, and the casing and tubing sizes are known and do not vary significantly. The "unknown" value is the packer depth. In general, wells bleed back about a gallon per thousand feet for a standard configuration (5.5" casing, 2.83" tubing, and test pressures between 300 and 400 psi). If a well bleeds back significantly less fluid than that, then the Region would suspect that the packer is not as deep as the operator has stated. The State would like to avoid subjective interpretations of "significantly less fluid" and instead have objective criteria for "passing" or "failing" this portion of the test. The Region will attempt to establish policy that the State can use to avoid ambiguity among field personnel when measuring fluid returns after SAPTs. One solution might be to further investigate wells that fail to produce 75 percent of the fluid returns expected for a well of a given configuration. The Region will work with the State on this issue further in the coming year.

Alternative Well Construction

The IDNR is considering changes to State rules that would allow an alternative to the current construction design standards. As a result of file reviews, the Division has identified a small number of existing wells that do not meet the requirement that the packer be set within 100 feet above the top of the injection zone. Because of the age and condition of the wells, well owners are reluctant to attempt to move the packer to a lower position that would satisfy existing requirements, but could lead to a loss of mechanical integrity or permanent damage to the well. In order to address this problem, the Division proposes to increase the distance within which the packer must be placed above the top of the injection zone from 100 feet to 200 feet. This additional 100 feet would accommodate those wells that have been discovered that do not meet the current requirements. The Region has some concerns about this proposal and the perception

that the current sound construction standards may be weakened to accommodate a very small number of situations. We are interested in how this proposal will not weaken existing standards and pose a threat to underground sources of drinking water as it implemented across the State for all Class II wells. The Region will also consult the National Technical Workgroup.

Annular Fluids

The IDNR is looking for guidance from Region 5 on what constitutes an acceptable annular fluid. The Region will share a paper on this issue by the National Technical Work Group with the IDNR. (attached)

Electronic Quarterly Reporting

The IDNR is interested in fulfilling quarterly reporting commitments as well as State grant submissions via the Internet. The Region needs to let IDNR know what requirements are involved in this process. The IDNR also wants to be kept apprised of any changes in the reporting schedule in regards to the Office of Enforcement and Compliance Assurance (OECA) requirements.

Proposed Project

Additionally, the Region is currently processing a grant for \$20,000 for a project that intends to link the IDNR database to the Indiana Geologic Survey database. IDNR will share its GIS information from Indiana Geological Survey with the Region. IDNR is also interested in receiving training on GIS and in getting trained through the Region or the Indiana Department of Environmental Management.

Recommendations for Future Actions

Backlog of Enforcement Cases

The IDNR reported that there is a significant backlog of UIC enforcement cases at the Indiana Attorney General's (AG's) Office. This is due at least in part to substantial staff turnover at the AG's office. Region 5 offered assistance with priority cases, through federal enforcement actions, to help avoid excessive delays. IDNR will consider this alternative.

File Reviews

IDNR plans to continue performing file reviews every 5 years and the Region supports maintaining this level of activity. Due to the thorough nature of file reviews, certain endangering wells have been discovered. Region 5 is encouraged by those efforts and the Region encourages the Division to continue to do file reviews at a once every 5 year pace.

QA Plan

On December 16, 1998, David Ullrich, Acting Regional Administrator for Region 5 wrote Mr. Macklin to inform him of the USEPA's adoption of a quality system approach for the generation, collection and use of environmental data. This system is to be documented through a Quality Management Plan for each Agency which will be needed by fiscal year 2000. Region 5 is currently assessing how we can best work with you to assist you in developing this document, and you should be receiving further correspondence from us on this subject in the near future.

WSP
4/26/99
JET for us
4/30/99